BALANCED ORIFICE PLATE

ABSTRACT OF THE DISCLOSURE

An orifice plate for use in a conduit through which fluid flows is defined by a central circular region having a

5 radius R_0 and a ring-shaped region surrounding the central circular region. The ring-shaped region has holes formed therethrough with those holes centered at each radius R thereof satisfying a relationship

$$A_R = a/(X_R V_R^b)$$

10 where A_R is a sum of areas of those holes having centers at radius R,

   X_R is a flow coefficient at radius R,

   V_R is a velocity of the fluid that is to flow through the conduit at radius R,

15   b is a constant selected to make at least one process variable (associated with the fluid that is to flow through the conduit) approximately equal at each radius R, and

   a is a constant that is equal to $(X_R A_R V_R^b)$ at each radius R.